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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/265,073

Applicant(s)

OVARD ET AL.

Examiner

Scott Au

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25,27-42 and 51-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25,27-42 and 51-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) ✓ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-25, 27-42, and 51-66 are pending.

Claims 26, and 43-50 are cancelled.

Response to Arguments

Applicant's arguments filed on July 20, 2007 with respect to claims 1-25, 27-42, and 51-66 have been fully considered but they are not persuasive.

In response to applicant's argument on pages 16-19 that the Office has failed to establish a proper prima facie 103 rejection of claim 1, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Wood, Jr. teaches a wireless communications system 10 includes a transponder 16 in radio communication with the interrogator 26 and a host computer 48 (col. 3 lines 53-60). However, Wood does not disclose a communication station remotely located with respect to the housing, and generating the forward link communication signal comprising a modulated signal, as called for in claims 1 and 11. In addition, as

called for in claim 21, Wood does not disclose (1) a plurality of forward link communication signals, (2) and a plurality of communication stations remotely located with respect to the housing, and (3) the circuitry generating the forward link communication signal comprising a modulated signal.

In an analogous art of tag identification system, MacLellan discloses an interrogator 103 remotely connected via LAN 102 to extend the range of communication with the tag or transponder. Further, MacLellan discloses a plurality of forward link communication signals and a plurality of communication stations (103) (i.e. interrogators) remotely located with respect to the housing (i.e. see Figure 1); and plurality of communication stations (103) (i.e. interrogators) remotely connected via LAN 102 to extend the range of communication with the tags or transponders.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a communication station remotely located with respect to the housing in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30-42, power adjustable) and MacLellan teaches a communication station to communicate the remote device to extend the range of communication. Furthermore, it would have been obvious to a person skilled in the art at the time the invention was made to include a plurality of forward link communication signals and a plurality of communication stations remotely located with respect to the housing in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30-42, power adjustable) and MacLellan teaches a

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plurality of forward link communication signals and a plurality of communication stations remotely located with respect to the housing to extend the range of communication with the tags or transponders.

However, Wood in view of MacLellan do not disclose the circuitry generating the forward link communication signal comprising a modulated signal.

Likewise, in another analogous art, Guthrie teaches a random interval inventory system (RIIS) 1, as shown in Fig. 1, comprising an interrogator formed by security console 2 and master transceiver 3 (see Col. 5, lines 25-34 and 42-50). As shown in Fig. 3, Guthrie discloses that the interrogator includes (a) processor 40 (i.e., circuitry) that generates commands (i.e., a forward link communication signal) (see Col. 8, lines 24-35 and 54-67; and Col. 11, lines 41-42); (b) direct sequence spread spectrum (DSSS) transmitter 44 or "on-off keying" (OOK) transmitter 46 forming communication circuitry that communicates the command to remote transceivers 4a-4n via and antenna 48, which forms antenna 3a (see Col. 8, lines 54-67 and Col. 14, lines 19-24); and (c) remote transceivers 4a-4n (i.e., communication stations) that are remotely located with respect to the interrogator formed by security console 2 and master transceiver 3, receive commands from master transceiver 3, and radiate wireless signals via antennas 4a1-4n1 (see Col. 5, lines 46-50; Col. 7, lines 52-57; Col. 8, lines 24-35 and 63-67; and Col. 15, lines 7-28). Guthrie's RIIS 1 also includes (d) tags 5a1-5xx (i.e., remote communication devices) that receive wireless signals from remote transceivers 4a-4n (see Col. 5, lines 25-29 and Col. 15, lines 7-55). Because master transceiver 3 includes (e) DSSS transmitter 44 (when tags 5a1-5xx are transmit-only tags) or OOK transmitter

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46 (when tags 5a1-5xx are transmit-receive tags), master transceiver 3 comprises a transmitter that generates a command (i.e., a forward link communication signal) comprising a signal modulated via DSSS or OOK.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wood and MacLellan's interrogator as taught by Guthrie because an interrogator that includes master transceiver 3 and remote transceivers 4a-4n, wherein master transceiver 3 and remote transceivers 4a-4n communicate via modulated signals extends the range of communication with the tag or transponder without a wired local network (LAN) (see Guthrie, Col. 7, lines 52-67 and Col. 8, lines 1-9), thereby making the system flexible and easy to implement.

In response to applicant's argument on pages 19-20 according to claim 3, that the Office has failed to establish a proper prima facie rejection inasmuch as positively recited limitations are not disclosed nor suggested by the prior art even if the references are combined, is not persuasive.

Wood in view of MacLellan and Guthrie disclose the system of claim 1, MacLellan further disclose the communication station including the adjustment of an electrical characteristic of the forward link communication signal (Fig. 8, col. 7, lines 26-47, power adjustment (col. 7, lines 43-45, the downlink carrier is always fully or partially present) associated with downlink transmission or interrogation transmission-100% AM or 50% AM or 100% power level and 50% power level).

In response to applicant's argument on page 21 according to claim 51, that MacLellan fails to disclose any modulation of signals using application processor 101 or communication of modulated signals via LAN 102, is not persuasive.

MacLellan discloses an Application Processor 101 communicates over Local Area Network (LAN) 102 to a plurality of Interrogators 103-104. The Interrogators may then each communicate with one or more of the Tags 105-107. For example, the Interrogator 103 receives an information signal, typically from an Application Processor 101. The Interrogator 103 takes this information signal and Processor 200 (FIG. 2) properly formats a downlink message (Information Signal 200a) to be sent to the Tag. With joint reference to FIGS. 1 and 2, Radio Signal Source 201 synthesizes a radio signal, the Modulator 202 modulates the Information Signal 200a onto the radio signal, and the Transmitter 203 sends this modulated signal via Antenna 204, illustratively using amplitude modulation, to a Tag (col. 3 lines 26-42). Therefore, it is obvious the signal transmitted from application processor 101 or communication of modulated signals via LAN 102 to the Interrogators (103-104) is modulated signal.

In response to applicant's argument on page 22 according to claim 53, that MacLellan fails to disclose a wired medium configured to communicate a modulated signal intermediate the application processor 101 and the interrogator 103, is not persuasive.

See the above respond of claim 51 for the modulation signal. According to Figures 1-3, show the communication between Application Processor 101, LAN 102 and Interrogator 103-104 are wired-line communication.

In response to applicant's argument on page 23 according to claims 11,21,27 and 35, that there is insufficient motivation to combine the teachings of Guthrie with the combined teachings of Wood and MacLellan, is not persuasive.

The argument is not persuasive similar to respond of claim 1 above.

In response to applicant's argument on pages 23-24 according to claim 58, applicants respectfully submit the motivation is insufficient, not supported by objective evidence, and the office has failed to establish a proper prima facie rejection, is not persuasive.

The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

It would have been obvious to a person skilled in the art at the time the invention was made to include generating a polling signal using circuitry of a source in the device of Wood, MacLellan, and Guthrie because Wood suggests generating a forward link communication signal and Pidwerbetsky teaches generating a polling signal using circuitry of a source for the purpose of reducing collision of responding communications.

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In response to applicant's argument on pages 25 according to claim 60, applicants the combination of prior arts fails to disclose or suggest communication of a modulated polling signal using communication medium types including a wire and electromagnetic energy, is not persuasive.

The argument is not persuasive similar to respond of claim 53 above.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 6-8, 11-13, 16-18, 21, 22, 24, 25, 27-29, 33-37, 41-42, 51-53, 55-57, 64, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, Jr.

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(US 5,842,118) in view of MacLellan et al. (US 5,649,296) and Guthrie et al. (US 6,058,374).

Regarding claims 1, 11, and 21, Wood discloses an interrogator of a wireless communication system (col. 3, lines 53-60, wireless communication system) comprising: an interrogator (col. 5, lines 25-27, the host computer acting as a master or interrogator) including: a housing (col. 5, lines 34-38, common housing) including circuitry configured to generate a forward link communication signal (col. 5, lines 30-33 and lines 45-47, forward link command (or function) generated at the host computer acting as master or interrogator); communication circuitry configured to communicate the forward link communication signal (Fig. 5, col. 12, lines 28-44, RF circuitry) and to radiate a forward link wireless signal corresponding to the forward link communication signal (Fig. 5, col. 12, lines 28-44, antennas - X1 and X2); and a remote communication device (col. 3, lines 53 to col. 4, line 16, device or transponder (16)); and wherein the circuitry of the housing comprises a transmitter configured to generate the forward link communication signal (Fig. 5, digitally transmitted data signal via host computer). But Wood does not disclose a communication station remotely located with respect to the housing, and generating the forward link communication signal comprising a modulated signal, as called for in claims 1 and 11. In addition, as called for in claim 21, Wood does not disclose (1) a plurality of forward link communication signals, (2) and a plurality of communication stations remotely located with respect to the housing, and (3) the circuitry generating the forward link communication signal comprising a modulated

signal.

However, MacLellan discloses, in the art of tag identification system, a communication station remotely located with respect to the housing (Fig. 1, interrogator (103) remotely connected via LAN (102)) to extend the range of communication with the tag or transponder. In addition, MacLellan discloses a plurality of forward link communication signals and a plurality of communication stations remotely located with respect to the housing (Fig. 1, interrogators (103) (or remote stations); multiple signals on interrogators) remotely connected via LAN (102)) to extend the range of communication with the tags or transponders.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a communication station remotely located with respect to the housing in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30-42, power adjustable) and MacLellan teaches a communication station to communicate the remote device to extend the range of communication. Furthermore, it would have been obvious to a person skilled in the art at the time the invention was made to include a plurality of forward link communication signals and a plurality of communication stations remotely located with respect to the housing in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30-42, power adjustable) and MacLellan teaches a plurality of forward link communication signals and a plurality of communication stations

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remotely located with respect to the housing to extend the range of communication with the tags or transponders.

Likewise, in another analogous art, Guthrie teaches a random interval inventory system (RIIS) 1, as shown in Fig. 1, comprising an interrogator formed by security console 2 and master transceiver 3 (see Col. 5, lines 25-34 and 42-50). As shown in Fig. 3, Guthrie discloses that the interrogator includes (a) processor 40 (i.e., circuitry) that generates commands (i.e., a forward link communication signal) (see Col. 8, lines 24-35 and 54-67; and Col. 11, lines 41-42); (b) direct sequence spread spectrum (DSSS) transmitter 44 or "on-off keying" (OOK) transmitter 46 forming communication circuitry that communicates the command to remote transceivers 4a-4n via and antenna 48, which forms antenna 3a (see Col. 8, lines 54-67 and Col. 14, lines 19-24); and (c) remote transceivers 4a-4n (i.e., communication stations) that are remotely located with respect to the interrogator formed by security console 2 and master transceiver 3, receive commands from master transceiver 3, and radiate wireless signals via antennas 4a1-4n1 (see Col. 5, lines 46-50; Col. 7, lines 52-57; Col. 8, lines 24-35 and 63-67; and Col. 15, lines 7-28). Guthrie's RIIS 1 also includes (d) tags 5a1-5xx (i.e., remote communication devices) that receive wireless signals from remote transceivers 4a-4n (see Col. 5, lines 25-29 and Col. 15, lines 7-55). Because master transceiver 3 includes (e) DSSS transmitter 44 (when tags 5a1-5xx are transmit-only tags) or OOK transmitter 46 (when tags 5a1-5xx are transmit-receive tags), master transceiver 3 comprises a transmitter that generates a command (i.e., a forward link communication signal) comprising a signal modulated via DSSS or OOK.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wood and MacLellan's interrogator as taught by Guthrie because an interrogator that includes master transceiver 3 and remote transceivers 4a-4n, wherein master transceiver 3 and remote transceivers 4a-4n communicate via modulated signals extends the range of communication with the tag or transponder without a wired local area network (LAN) (see Guthrie, Col. 7, lines 52-67 and Col. 8, lines 1-9), thereby making the system flexible and easy to implement.

Regarding claims 2 and 12, Wood continues, as disclosed in claim 1, to disclose a driver amplifier to increase the power of the forward link communication signal (Fig. 7, preamplifier (79); col. 6, lines 30-42, power adjustable).

Regarding claims 3 and 13, MacLellan, as disclosed in claim 1, to disclose the communication station including the adjustment of an electrical characteristic of the forward link communication signal (Fig. 8, col. 7, lines 26-47, power adjustment (col. 7, lines 43-45, the downlink carrier is always fully or partially present) associated with downlink transmission or interrogation transmission-100% AM or 50% AM or 100% power level and 50% power level).

Regarding claims 6 and 16, as shown in Fig. 7, Wood discloses that RF circuitry 54 (i.e., the communication station) includes a power amplifier (PA) 79, which receives the forward link communication signal from enhanced parallel port (EPP) circuitry 50

(i.e., communication circuitry) and amplifies the forward link communication signal (see Fig. 5, EPP circuitry 50; Col. 12, lines 28-44; and Col. 13, lines 16-33).

Regarding claims 7 and 17, Wood's communication station, as shown in Fig. 5, further includes antennas X1, X2, R1, and R2 to receive and radiate (see Col. 5, lines 39-52).

Regarding claims 8 and 18, Wood's radio frequency data communications device 12 is understood to be a radio frequency identification (RFID) device (see Col. 4, lines 19-26, RF identification badge).

Regarding claim 51, MacLellan teaches the wireless communication system according to claim 1 wherein the communication station is configured to convert the forward link communication signal comprising the modulated signal from a first communication medium type (Figs. 1-3, first modulated signal within 101-103 circuits (wired circuits); modulated digital signal out of computer 101 associated with application processor) to a second communication medium type (Figs. 1-3, second modulated signal out of 204) comprising a wireless medium and different than the first communication medium type.

Regarding claim 52, MacLellan teaches the wireless communication system according to claim 51 wherein the first communication medium type comprises a wired medium (Figs. 1-3, first modulated signal within 101-103 circuits (wired circuits)).

Regarding claim 53, MacLellan teaches the wireless communication system according to claim 1 wherein the communication circuitry comprises a wired medium configured to communicate the forward link communication signal comprising the modulated signal intermediate the housing and the communication station (Figs. 1-3, first modulated signal within 101-102 and communication stations 103 (wired LAN circuits); digital signal out of computer).

Regarding claim 64, Wood teaches the wireless communication system according to claim 1 wherein the forward link communication signal generated by the circuitry of the housing comprises data including command (col. 5, lines 34-52, common housing of host computer 48 and interrogator 26; interrogation signal or command).

All subject matters in claim 22 is disclosed in claim 7 and therefore, rejections of all subject matters expressed in claim 22 is met by references and associated arguments applied to rejections of claim 7.

Regarding claim 24, Wood discloses an interrogator of a wireless communication system (col. 3, lines 53-60, wireless communication system). But Wood is silent on

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communication circuit configured to communicate one forward link communication signal intermediate the housing and communication station.

However, MacLellan discloses, in the art of tag identification system, communication circuit configured to communicate one forward link communication signal intermediate the housing and communication station (Fig. 1, LAN (102) circuit is analogous to intermediate communication circuit) to extend the range of communication with the tags or transponders.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include communication circuit configured to communicate one forward link communication signal intermediate the housing and communication station in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30-42, power adjustable) and MacLellan teaches communication circuit configured to communicate one forward link communication signal intermediate the housing and communication station to extend the range of communication with the tags or transponders.

Regarding claim 25, Wood In view of MacLellan discloses an interrogator according to claim 21 is a wireless communication system (Wood-col. 3, lines 53-60, wireless communication system); and the interrogator wherein the communication stations (MacLellan-Fig. 2, power associated with radio signal sources for plural interrogator stations 103...103 + N) are individually positioned to radiate the forward link wireless signal within one of a plurality of communication ranges (Wood-col. 6, lines 30-

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42, power adjustable device provide different ranges according to sensitivity of tag location).

Claims 27-29 and 33-34 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 1-3, 6, and 8. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 1-3, 6, and 8 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in claims 27-29 and 33-34 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claims 27-29 and 33-34 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 1-3, 6, and 8.

Regarding claim 65, Wood teaches the method according to claim 27 wherein the generating the forward link communication signal comprising data including command (col. 5, lines 34-52, common housing of host computer 48 and interrogator 26; interrogation signal or command).

Claims 35-37 and 41 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 11-13 and 16. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 11-13 and 16 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in claims 35-37 and 41 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claims 35-37 and 41 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 11-13 and 16.

Claim 42 recites a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 11, 21, and 25. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 11, 21 and 25 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in claim 42 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is

considered that rejection of the limitations expressed in claim 42 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 11, 21, and 25.

Regarding claim 55, MacLellan teaches the method according to claim 35 wherein the radiating comprises converting the forward link communication signal comprising the modulated signal from a first communication medium type (Figs. 1-3, first modulated signal within 101-103 circuits (wired circuits)) to a second communication medium type (Figs. 1-3, second modulated signal out of 204) comprising a wireless medium and different than the first communication medium type.

Regarding claim 56, MacLellan teaches the method according to claim 55 wherein the first communication 'Medium type comprises a wired medium (Figs. 1-3, first modulated signal within 101-103 circuits (wired circuits)).

Regarding claim 57, MacLellan teaches the method according to claim 35 wherein the communicating comprises communicating the forward link communication signal comprising the modulated signal from the housing using a wired medium (Figs. 1-3, first modulated signal within 101-102 and communication stations 103 (wired LAN circuits); digital signal out of computer).

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4. Claims 4-5, 14-15, 23, 30-32, 38-40, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, Jr. (US 5,842,118) in view of MacLellan et al. (US 5,649,296) and Guthrie et al. (US 6,058,374) as applied to claims 1, 11, 22, 27, 29, and 37 above, and further in view of Lomp et al. (5,799,010).

Regarding claims 4, 14, 23, 30, and 38, Wood in view of MacLellan and Guthrie continues, as disclosed in claim 3, to disclose the adjustment of electrical characteristics (MacLellan-Fig. 8, col. 7, lines 26-47, power adjustment associated with down link transmission-100% AM or 50% AM). But Wood in view of MacLellan and Guthrie does not disclose the adjustment circuitry comprises automatic gain control circuitry.

Lomp discloses, in the art of communication power control system, the adjustment circuitry comprises automatic gain control circuitry (Figs. 29-30, col. 66, lines 44-65, AGC) for the purpose of power control of subscriber unit and base stations within communication system.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include the adjustment circuitry comprises automatic gain control circuitry in the device of Wood in view of MacLellan and Guthrie as evidenced by Lomp because Wood in view of MacLellan and Guthrie suggests the adjustment of electrical characteristics and Lomp teaches the adjustment circuitry comprises automatic gain control circuitry for the purpose of power control of subscriber unit and base stations within communication system.

Regarding claims 5, 15, 31, and 39, Lomp continues, as disclosed in claim 4, to disclose the automatic gain control circuitry is configured to monitor the power and adjust the power (Figs. 29-30, power control system or monitoring system, col. 66, lines 44-65, AGC).

Regarding claim 54, Lomp teaches the wireless communication system according to claim 4 wherein the automatic gain control circuitry is configured to adjust the electrical characteristic of the forward link communication signal comprising the modulated signal which comprises a wired signal (Figs. 29-30, power control system or monitoring system of wired signal, col. 66, lines 44-65, AGC).

Claims 32 and 40 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 4, 5, 14, and 15. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 4, 5, 14, and 15 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in claims 32 and 40 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claims 32 and 40 would have been obvious to the artisan of ordinary skill

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at the time of the invention for the reasons given in the rejection of claims 4, 5, 14, and 15.

5. Claims 9, 10, 19, 20, and rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, Jr. (US 5,842,118) in view of MacLellan et al. (US 5,649,296) and Guthrie et al. (US 6,058,374) as applied to claims 1, 11 above, and further in view of Bassirat (6,353,729).

Regarding claim 9, Wood, in view of MacLellan and Guthrie, teaches an interrogator that communicates wirelessly with remote transceivers 4a-4n (i.e., communication stations) (see Guthrie, Col. 7, lines 52-57; Col. 8, lines 24-35 and 54-67; Col. 11, lines 41-43; and Col. 15, lines 7-28). Wood, in view of MacLellan and Guthrie further teaches using power line link 50 in lieu of DSSS transmitter 44 or OOK transceiver 46 (see Guthrie, Col. 9, lines 8-13) but is silent on a coaxial RF cable associated with remote transceivers 4a-4n (i.e., communication stations).

However, Bassirat teaches, in the art of network communication system, a coaxial RF cable associated with repeater station (col. 9, lines 11-18, coaxial cable associated with RF wherein the cable is used to extend the computer network via the repeater, and LAN is one of computer network architecture) for the purpose of extending the communication range.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a coaxial RF cable in the device of Wood in view of

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MacLellan and Guthrie as evidenced by Bassirat because Wood in view of MacLellan and Guthrie suggests wired communication system and Bassirat teaches a coaxial RF cable associated with communication station for the purpose of extending the communication range.

Regarding claim 10, Wood, in view of MacLellan and Guthrie, discloses a communication circuitry that includes a plurality of transceivers coupled to the housing (MacLellan-Fig. 1, interrogator as communication station 103; and Wood-col. 13, lines 44-50) but omits teaching a plurality of wireless transceivers coupled to a common antenna (i.e., a communication station).

Bassirat teaches, in the art of network communication system, a plurality of transceivers associated with repeater station (Fig. 5, plural transceivers associated with antennas having Gar and Gaff) for the purpose of extending the communication range.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a plurality of transceivers in the device of Wood in view of MacLellan and Guthrie as evidenced by Bassirat because Wood in view of MacLellan and Guthrie suggests wired communication system and Bassirat teaches a plurality of transceivers associated with communication station for the purpose of extending the communication range.

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All subject matters in claim 49 are disclosed in claims 1 and 9, and therefore rejection of the subject matters expressed in claim 49 are met by references and associated arguments applied to rejection of claims 1 and 9.

All subject matters in claim 50 are disclosed in claims 1 and 10, and therefore rejection of the subject matters expressed in claim 50 are met by references and associated arguments applied to rejection of claims 1 and 10.

6. Claims 58-63 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, Jr. (US 5,842,118) in view of MacLellan et al. (US 5,649,296), Guthrie et al. (US 6,058,374), and Pidwerbetsky et al. (6,084,530).

All subject matters except generating a polling signal using circuitry of a source in claims 58 are disclosed in claims 1 and 51. However, Pidwerbetsky teaches, in the art of tag identification system, generating a polling signal using circuitry of an interrogator (col. 12, lines 12-18, polls by interrogators 103) and interrogator receiving information from application processor (col. 3, lines 32-55, source associated with application processor or pc 101) for the purpose of reducing collision of responding communications. Furthermore, one skilled in the art recognizes using circuitry of source associated with housing or pc and using circuitry of interrogator provide same interrogation process.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include generating a polling signal using circuitry of a source in the device of Wood, MacLellan, and Guthrie because Wood suggests generating a forward link communication signal and Pidwerbetsky teaches generating a polling signal using circuitry of a source for the purpose of reducing collision of responding communications. Therefore rejection of the subject matters expressed in claims 58 are met by references and associated arguments applied to rejection of claims 1 and 51 and to rejection provided in the previous paragraph.

All subject matters in claim 59 are disclosed in claim 51, and therefore rejection of the subject matters expressed in claim 59 are met by references and associated arguments applied to rejection of claim 51.

All subject matters in claim 60 are disclosed in claim 8, and therefore rejection of the subject matters expressed in claim 60 are met by references and associated arguments applied to rejection of claim 8.

Regarding claim 61, MacLellan teaches the source comprises a housing and the first communicating comprises communicating externally of the housing (Fig. 1, first communicating is between housing 101 and interrogator or base station 103).

Regarding claim 62, MacLellan teaches the method of claim 58 wherein the modulating comprises RF modulating (Fig. 1, modulated RF signal to tag 105).

Regarding claim 63, Pidwerbetsky teaches the method of claim 62 wherein the modulating comprises RF modulating (Fig. 2, modulator 202 to generate modulated RF signal to specific tag 105 via antenna 204) a carrier signal (Fig. 2, carrier signal from radio signal source 201) using a data signal (Fig. 2, information signal 200a) configured to implement polling of the transponder (col. 12, lines 12-18, polling tags 105).


Regarding claim 66, MacLellan teaches the method of claim 58 wherein the second communicating comprises communicating using the communications station (Figs. 1-3, second modulated signal out of antenna 204 or 304).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Au whose telephone number is (571)-272-3063. The examiner can normally be reached on M-F, 9:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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